

TRANSMITTAL OF APPEAL BRIEF (Large Entity)Docket No.
47003.070002

In Re Application Of: Steven D. Seip, et al.

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/673,791	29 September 2003	William K. Cheung	041068	1713	2992

Invention: Polyolefin Compositions Exhibiting Enhanced Stain Resistance

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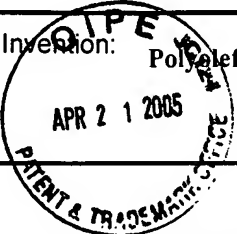
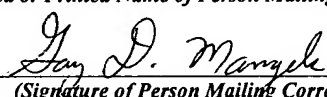
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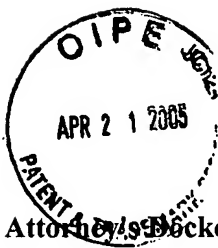
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Applicant(s): Steven D. Seip, et al.			
Serial No. 10/673,791	Filing Date September 29, 2003	Examiner William K. Cheung	Group Art Unit 1713
Invention: Polytetrafen Compositions Exhibiting Enhanced Stain Resistance			
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Patent

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Steven D. Seip, et al. :
Serial No.: 10/673,791 : Group No. : 1713
Filed: September 29, 2003 : Examiner: William K. Cheung

For: Polyolefin Compositions Exhibiting Enhanced Stain Resistance

BRIEF ON APPEAL UNDER 37 C.F.R. § 41.37

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04/25/2005 EFLORES 00000048 10673791

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04/25/2005 EFLORES 00000048 10673791
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Real party in interest

Applicant's real party in interest is:

Sunoco, Inc. (R&M)
1801 Market Street
Philadelphia, PA 19103

Related appeals and interferences

Applicants, applicant's assignee and applicant's legal representative are unaware of any appeals or interferences that are related to the instant appeal, or that will affect, be affected by or have any bearing on the Board's decision in the instant appeal.

Status of the Claims

As originally filed, the application contained claims 1-24. Claims 7-11 were cancelled by amendment. Claims 1-6 and 12-24 are pending and are being appealed.

Applicants appeal from the rejection of claims 4, 5, 14, 15, 19, 20, 23 and 24 under 35 U.S.C. § 112, second paragraph. Applicants appeal from the rejection of claims 1-6 and 12-24 under 35 U.S.C. § 102(b), or, in the alternative, § 103(a).

Status of amendments

No amendments have been filed subsequent to final rejection.

Summary of claimed subject matter

There are four independent claims, claims 1, 12, 17 and 21.

Claims 1-6 on appeal define a household article exhibiting enhanced resistance to staining, said household article comprising: a nucleated propylene/ethylene impact copolymer having an ethylene content of up to about 15 percent by weight, and a xylene solubles fraction having an intrinsic viscosity of at least 3 dL/g; wherein said xylene soluble fraction has a molecular weight (Mw/1000) of at least about 350; said propylene/ethylene copolymer

containing an additive package consisting essentially of: a phenolic antioxidant, a phosphite, and an acid scavenger; said household article being essentially free of sodium containing additives.

Support for each of these items in the specification is listed below, where the paragraph in the specification that supports each item is given in brackets following the item.

1. A household article exhibiting enhanced resistance to staining [0030], said household article comprising:

a nucleated propylene/ethylene impact copolymer [0033] having an ethylene content of up to about 15 percent by weight, and a xylene solubles fraction having an intrinsic viscosity of at least 3 dL/g [0034];

wherein said xylene soluble fraction has a molecular weight ($M_w/1000$) of at least about 350 [0034];

said propylene/ethylene copolymer containing an additive package consisting essentially of: a phenolic antioxidant, a phosphite, and an acid scavenger [0035];

said household article being essentially free of sodium containing additives. [0035]

Claims 12-16 on appeal define a household article exhibiting enhanced stain resistance, said household article comprising: a propylene homopolymer having a crystallinity of at least about 55 percent, said propylene polymer containing an additive package consisting essentially of: a phenolic antioxidant, a phosphite, and an acid scavenger; said household article being essentially free of sodium containing additives.

Support for each of these items in the specification is listed below, where the paragraph in the specification that supports each item is given in brackets following the item.

12. A household article exhibiting enhanced stain resistance [0030], said household article comprising:

a propylene homopolymer having a crystallinity of at least about 55 percent [0036],
 said propylene polymer containing an additive package consisting essentially of: a
 phenolic antioxidant, a phosphite, and an acid scavenger [0037];
 said household article being essentially free of sodium containing additives. [0037]

Claims 17-20 on appeal define a composition for producing household articles exhibiting enhanced resistance to staining, said composition comprising: a nucleated propylene/ethylene impact copolymer having an ethylene content of up to about 15 percent by weight, and a xylene solubles fraction having an intrinsic viscosity of at least 3 dL/g; wherein said xylene soluble fraction has a molecular weight (Mw/1000) of at least about 350; said propylene/ethylene impact copolymer containing an additive package consisting essentially of: a phenolic antioxidant, a phosphite, and an acid scavenger; said composition being essentially free of sodium containing additives.

Support for each of these items in the specification is listed below, where the paragraph in the specification that supports each item is given in brackets following the item.

17. A composition for producing household articles exhibiting enhanced resistance to staining [0030], said composition comprising:

a nucleated propylene/ethylene impact copolymer [0033] having an ethylene content of
 up to about 15 percent by weight, and a xylene solubles fraction having an intrinsic
 viscosity of at least 3 dL/g [0034];
 wherein said xylene soluble fraction has a molecular weight (Mw/1000) of at least about
 350 [0034];

said propylene/ethylene impact copolymer containing an additive package consisting essentially of: a phenolic antioxidant, a phosphite, and an acid scavenger [0035];
said composition being essentially free of sodium containing additives [0035].

Claims 21-24 on appeal define a composition for producing household articles exhibiting enhanced resistance to staining, said composition comprising: a propylene homopolymer having a crystallinity of at least about 55 percent, said propylene polymer containing an additive package consisting essentially of: a phenolic antioxidant, a phosphite, and an acid scavenger; said composition being essentially free of sodium containing additives.

Support for each of these items in the specification is listed below, where the paragraph in the specification that supports each item is given in brackets following the item.

21. A composition for producing household articles exhibiting enhanced resistance to staining [0030], said composition comprising:

a propylene homopolymer having a crystallinity of at least about 55 percent [0036],
said propylene polymer containing an additive package consisting essentially of: a
phenolic antioxidant, a phosphite, and an acid scavenger [0037];
said composition being essentially free of sodium containing additives. [0037]

Grounds of rejection to be reviewed on appeal

Examiner's rejection of claims 4, 5, 14, 15, 19, 20, 23 and 24 under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner indicates the term "thiosynergist" is not defined in the specification and the type of synergy is not recited.

Examiner's rejection of claims 1-6 and 12-24 under 35 U.S.C. § 102(b), as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Besto et al. (US 5,925,703).

Examiner's rejection of claims 5, 15, 19 and 24 under 35 U.S.C. § 103(a), as being unpatentable over Besto et al., which is affirmed by GE product trade literature on Ultrinox 641.

Argument

It is respectfully submitted that the Examiner has committed several errors in the rejection of claims 4, 5, 14, 15, 19, 20, 23 and 24 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. First, the Examiner erred in requiring the specification to define the term "thiosynergist", which is familiar to one having ordinary skill in the art. This is contrary to accepted procedure where "information which is well known in the art need not be described in detail in the specification". (MPEP 2163.(II)(A)(2).

Applicants have submitted examples of various writings which demonstrate that the term "thiosynergist" is familiar to one having ordinary skill in the art of polypropylene. Second, the Examiner erred in requiring the specification to specify what type of synergy occurs in the use of a thiosynergist. One having ordinary skill in the art would be familiar with the mechanisms of oxidation of polymers and how the use of thiosynergists compliments the activity of primary antioxidants. Applicants respectfully submit that the use of the term "thiosynergist" in the specification was proper in that the term is familiar to one having ordinary skill in the art, and the Applicant is using the term in a manner consistent with its ordinary meaning.

It is respectfully submitted that the Examiner has committed several errors in the rejection of claims 1-6 and 12-24 under 35 U.S.C. § 102(b), as being anticipated by, or in the

alternative, under 35 U.S.C. § 103(a), as obvious over U.S. Patent No. 5,925,703 to Betso *et al.* ("Betso") The Examiner has erred by improperly broadly interpreting "thiosynergist" to be anything including, moisture or air that may be entrapped during the molding process for forming the articles or compositions." The Examiner has compounded this error by using this interpretation to incorrectly conclude that the claims are anticipated by Betso. Further, Examiner has not shown that Betso discloses each and every element of Claims 1-6 and 12-24 either explicitly or inherently. The Examiner has further failed to demonstrate the three basic criteria that must be met to establish a *prima facie* case of obviousness. The Examiner has failed to show any motivation to modify the teachings in Betso to obtain the claims on appeal. The Examiner has not demonstrated a reasonable expectation of success. The Examiner has not shown that Betso teaches all the elements of the claims on appeal. Finally, the Examiner has failed to present a convincing line of reasoning as to why the claims on appeal would have been obvious in light of the teachings of Betso.

It is respectfully submitted that the Examiner has committed several errors in the rejection of claims 5, 15, 19 and 24 under 35 U.S.C. § 103(a), as being unpatentable over Betso. The same errors made in the rejection of claims 1-6 and 12-24 under 35 U.S.C. § 102(b), as being anticipated by, or in the alternative, under 35 U.S.C. § 103(a), as obvious over Betso applied in making this rejection.

I. Rejection under 35 U.S.C. § 112, second paragraph is Improper

It is respectfully submitted that the Examiner has committed an error in the rejection of Claims 4, 5, 14, 15, 19, 20, 23 and 24 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Examiner asserts that the term "thiosynergist" is not defined in the specification and does not specify what type of synergy is shown. Examiner

further states that since the specification fails to disclose what compounds are considered a "thiosynergist", the claims are indefinite. Applicants respectfully appeal this rejection.

The Examiner has erred in requiring the specification to define the term, "thiosynergist". Applicants respectfully submit that one having ordinary skill in the art of polypropylene is familiar with the term "thiosynergist" and how these compounds function in polyolefins. "A patent specification need not teach, and preferably omits, what is well known in the art." *Hybritech Inc. v. Monoclonal Antibodies, Inc.* 802 F.2d 1367, 1384, 231 U.S.P.Q. 81, 94 (Fed. Cir. 1986). The term "thiosynergist" has ordinary meaning in the art as sulfur-containing secondary antioxidants which are used in conjunction with other primary stabilizers to enhance the effectiveness of the primary stabilizers. Applicants therefore respectfully submit that it is not necessary to provide a definition for "thiosynergist" in the specification because it is a common term which is recognized in the art.

For Examiner's convenience Applicants have provided copies of the following references, which discuss thiosynergists: (1) Technical Information for Lowinox DLTDP, from Great Lakes Chemical Corp.; (2) Sterically Hindered Phenols in Production and Processing of PVC, Wegmann *et al.*, see page 2, last paragraph; and (3) The Chemistry and Service of Stabilization, from Great Lakes Chemical Corp., Lee *et al.*, see pages 4 and 11 -13. Reference 1, Technical Information on Lowinox DLTDP - Thiosynergist Antioxidant, was provided as an example of a commercially available product, which is recognized by those skilled in the art, as being in the class of antioxidants as a thiosynergist antioxidant. The name of the product, Lowinox DLTDP - Thiosynergist Antioxidant, is linked to its identity as a thiosynergist antioxidant. The bulletin also states:

Lowinox DLTDP decomposes and neutralizes hydroperoxides, formed by auto-oxidation of polymers. It is quite often used as a synergist in combination with

phenolic antioxidants. It is mainly used in polyethylene, polypropylene, ABS, polyster and polyamide.

The second reference, by Wegmann, describes the use of sterically hindered phenols in the production and processing of PVC. The third paragraph of the abstract states:

Methylmethacrylate-butadiene-styrene (MBS) is a frequently used impact modifier for rigid PVC. MBS needs especially efficient protection against the oxidative degradation of its rubber phase. This is optimally guaranteed by a synergistic blend of a hindered phenol with a thiosynergist (e.g. dilauryl-thio-dipropionate "DLTDP").

The last two paragraphs on page 2 discuss the market requirements for antioxidants for MBS.

The last paragraph states:

State of the art have been solid, fully or partially hindered phenols, like ®IRGANOX 1076 or ®IRGANOX 245 in emulsified form, together with thiosynergists, like DLTDP (di-lauryl-thio-dipropionate) or DSTDP (distearyl-thio-dipropionate).

The third reference, The Chemistry and Service of Stabilization, also demonstrates that thiosynergist is a term recognized by practitioners of the art. On pages 4, 11-13, and 30, the interaction between thiosynergists (secondary antioxidants) and HALS (primary antioxidants) is described. These three references demonstrate that the term "thiosynergist" would be recognized by one having ordinary skill in the art as being a sulfur-containing antioxidant.

Applicants respectfully submit that the use of the term "thiosynergist" in the specification is proper in that the term is familiar to one having ordinary skill in the art, and the Applicants are using the term in a manner consistent with its ordinary meaning.

The Examiner also erred in requiring the specification to specify what type of synergy occurs in the use of a thiosynergist. One having ordinary skill in the art would be familiar with the mechanisms of oxidation of polymers and how the use of thiosynergists

compliments the activity of primary antioxidants. Applicant demonstrated this by having provided the Examiner with Reference 1, Technical Information on Lowinox DLTDP - Thiosynergist Antioxidant, cited above. This reference, in addition to showing that the term "thiosynergist" would be recognized by one skilled in the art as being in the class of antioxidants, also demonstrates that the synergistic effects are well known to one skilled in the art. The bulletin states:

Lowinox DLTDP decomposes and neutralizes hydroperoxides, formed by auto-oxidation of polymers. It is quite often used as a synergist in combination with phenolic antioxidants. It is mainly used in polyethylene, polypropylene, ABS, polyster and polyamide.

Applicants respectfully submit that the synergy resulting from the use of "thiosynergist" is familiar to one having ordinary skill in the art, and therefore use of the term "thiosynergist" in the specification is proper. The above information demonstrates that the term "thiosynergist" and its synergistic behavior is familiar to one having ordinary skill in the art and that the use of this term in the specification as written is proper.

Based on the above, Applicants respectfully submit that the term thiosynergist used in Claims 4, 5, 14, 15, 19, 20, 23 and 24 would be recognized by one having ordinary skill in the art and that Claims 4, 5, 14, 15, 19, 20, 23 and 24 are therefore definite. Applicants therefore respectfully submit that claims 4, 5, 14, 15, 19, 20, 23 and 24 comply with the requirements under 35 U.S.C. § 112, second paragraph. Applicants therefore respectfully request that the rejection be reversed.

II. Rejections Under 35 U.S.C. § 102(b)/103(a) is Improper

It is respectfully submitted that the Examiner has committed errors in the rejection of Claims 1-6 and 12 -24 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,925,703 to Betso. The Examiner

first erred by improperly broadly interpreting "thiosynergist" to encompass anything including, moisture or air that may be entrapped during the molding process for forming the articles or compositions and using this interpretation in making these rejections.

A. Rejection Under 35 U.S.C. § 102(b)

The Examiner erred in rejecting claims 1 -6 and 12 -24 under 35 U.S.C. § 102(b) as being anticipated by Betso. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The Examiner has not been able to specifically point out how "each and every element as set forth in the claim is found, either expressly or inherently described" in Betso. Rather, the Examiner incorrectly asserts that he has basis to hold a reasonable belief that Betso inherently discloses the following properties recited in Claims 1-6 and 17-20: a propylene/ethylene impact copolymer having an ethylene content of up to 15 percent by weight, and a xylene solubles fraction having an intrinsic viscosity of at least 3 dL/g and a molecular weight (Mw/1000) of at least 350. It is the Examiner's position that therefore the burden has shifted to Applicants to demonstrate otherwise, citing *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977), and *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). In *Best*, the court found that "all the positive process limitations are expressly disclosed except for the functionally expressed rate of cooling." The current case is distinguished from *Best* in that all of the compositional limitations of the claims are not expressly disclosed in Betso. *Fitzgerald* is similar to *Best* in that the issue also involved product by process involving crystallization shrinkage being a function of the cooldown rate of the crystallizable polymer. The present case is similarly distinguished from the facts in *Fitzgerald*.

Applicants therefore respectfully submit that Examiner has not established inherency of the recited properties of the claims in the current application in Betso, and therefore the burden has not shifted to the Applicants. The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed Cir. 1993). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.' Inherency, however, may not be established by probabilities or possibilities. The fact that a certain thing may result from a given set of circumstances is not sufficient." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted). "In relying on a theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).

Applicants respectfully submit that Examiner has offered no basis in fact or technical reasoning to support his determination that Betso inherently discloses the recited properties. Betso discloses propylene impact copolymers generically, and does not provide any disclosure of specific compositional properties of those polymers. Applicants also respectfully point out that the disclosure in Betso of an ethylene content of 1.5 to 7 percent refers to random copolymers, not impact copolymers. See Betso col. 9, lns. 17 to 19. Nonetheless, as can be seen from Table IX in the instant application, not all propylene/ethylene impact copolymers that have an ethylene content in the range of up to 15 percent necessarily have the intrinsic viscosity and molecular weight (Mw/1000) properties

recited in claims 1-6 and 17-20. Applicants therefore respectfully submit that Examiner has not established the inherency of the recited properties in Betso.

Examiner has erroneously pointed to the same Table in an attempt to demonstrate that he does have a reasonable belief that Betso discloses these properties. There are two errors in doing this. First, the Examiner points to the Applicants own disclosure to try to prove inherency. The inherency must be shown by extrinsic evidence, not the applicants disclosure. Second, the Table does not show inherency, but instead the lack of inherency. Specific comparative examples are shown of impact copolymers that do not possess the claimed properties.

With respect to Claims 12-16 and 21-24, Examiner asserts he has basis to hold a reasonable belief that Betso inherently discloses a propylene homopolymer having a crystallinity of at least about 55 percent.

Again, Applicants respectfully submit that Examiner has offered no basis in fact or technical reasoning to support his determination that Betso inherently discloses the recited property. Betso generically discloses propylene homopolymers, but is completely silent with respect to the crystallinity of those polymers and any other properties tending to affect the crystallinity of those polymers. Applicants therefore respectfully submit that Examiner has not established the inherency of the recited property in Betso.

Because Examiner has not provided a reasonable basis in fact or technical reasoning why the recited properties are inherently disclosed in Betso, Applicants respectfully submit that Examiner has not established anticipation of Claims 1-6 and 12-24 by Betso. Therefore Applicants request that the rejection be reversed.

B. Rejection Under 35 U.S.C. § 103(a)

The Examiner erred in rejecting claims 1 -6 and 12 -24 under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,925,703 to Betso. As with the rejection under 35

U.S.C. § 102(b), Examiner has erred by improperly interpreting the term "thiosynergist" and in interpreting the application of the teachings of Betso to the claims on appeal. Examiner has failed to establish a *prima facie* case of obviousness. In order to establish a *prima facie* case of obviousness three basic criteria must be met. First there must be some suggestion or motivation in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference(s) must teach all of the claim limitations. "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure." *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991).

Applicants respectfully submit that because Betso does not disclose every element recited in Claims 1 -6 and 12 -24, those claims cannot be obvious over Betso. The detailed reasons for this were presented above in under the Rejection Under 35 U.S.C. § 102(b). For the same reason, Applicants respectfully submit that Examiner has not established a *prima facie* case of obviousness of Claims 1 -6 and 12 -24 over Betso. Examiner had also rejected claims 5, 15, 19 and 24 under 35 U.S.C. § 103(a) as being unpatentable over Betso. This rejection is covered by the responses to the rejections of Claims 1 -6 and 12 -24. Therefore Applicants request that this rejection be reversed.

Conclusion

The claims on appeal are not indefinite under 35 U.S.C. § 112, second paragraph. The term "thiosynergist" is familiar to one having ordinary skill in the art and was properly used in the specification. The claims on appeal are not anticipated under 35 U.S.C. § 102(b), or, in the alternative, obvious under 35 U.S.C. § 103(a) over Betso et al. The Examiner has not been able to demonstrate the claims are anticipated by failure to specifically point out

how "each and every element as set forth in the claim is found, either expressly or inherently described" in Betso". A *prima facie* case of obviousness cannot be shown because: (1) there was no suggestion or motivation to modify Betso; (2) there was no reasonable expectation of success, based on prior art; and (3) the prior art did not teach or suggest all of the claim limitations. It is respectfully requested that the Board use its authority to reverse the Examiner's rejection under 35 U.S.C. § 102(b), 35 U.S.C. § 103(a) and 35 U.S.C. § 112, second paragraph and allow the application.

Respectfully submitted,

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April 21, 2005

Claims appendix

Claims 1-6 and 12-24 are subject to appeal and are listed below.

1. A household article exhibiting enhanced resistance to staining, said household article comprising:

a nucleated propylene/ethylene impact copolymer having an ethylene content of up to about 15 percent by weight, and a xylene solubles fraction having an intrinsic viscosity of at least 3 dL/g;

wherein said xylene soluble fraction has a molecular weight (Mw/1000) of at least about 350;

said propylene/ethylene copolymer containing an additive package consisting essentially of: a phenolic antioxidant, a phosphite, and an acid scavenger;

said household article being essentially free of sodium containing additives.
2. The household article according to claim 1, wherein said propylene/ethylene impact copolymer is nucleated with talc.
3. The household article according to claim 1, wherein said acid scavenger is selected from the group consisting of: hydrotalcite like materials and calcium stearate.
4. The household article according to claim 1, wherein said propylene/ethylene impact copolymer further contains a thiosynergist.

5. The household article according to claim 4, wherein said propylene/ethylene impact copolymer contains the following amounts of each additive by weight based on said propylene/ethylene impact copolymer:

from about 1000 to about 3000 ppm of a nucleating agent;

from about 500 to about 1000 ppm of said phenolic antioxidant;

from about 500 to about 800 ppm of said phosphite;

up to 5000 ppm of said thiosynergist; and

from about 200 to about 500 ppm of said acid scavenger.

6. The household article according to claim 4, wherein said household article is a component for a household appliance.

12. A household article exhibiting enhanced stain resistance, said household article comprising:

a propylene homopolymer having a crystallinity of at least about 55 percent,

said propylene polymer containing an additive package consisting essentially of: a

phenolic antioxidant, a phosphite, and an acid scavenger;

said household article being essentially free of sodium containing additives.

13. The household article according to claim 12, wherein said acid scavenger is selected from the group consisting of: hydrotalcite like materials and calcium stearate.

14. The molded household article according to claim 12, wherein said propylene homopolymer further contains a thiosynergist.

15. The molded household article according to claim 14, wherein said propylene homopolymer contains the following amounts of each additive by weight based on said propylene homopolymer:

from about 500 to about 1000 ppm of said phenolic antioxidant;

from about 500 to about 800 ppm of said phosphite;

up to 5000 ppm of said thiosynergist; and

from about 200 to about 500 ppm of said acid scavenger.

16. The household article according to claim 14, wherein said household article is a component for a household appliance.

17. A composition for producing household articles exhibiting enhanced resistance to staining, said composition comprising:

a nucleated propylene/ethylene impact copolymer having an ethylene content of up to about 15 percent by weight, and a xylene solubles fraction having an intrinsic viscosity of at least 3 dL/g;

wherein said xylene soluble fraction has a molecular weight ($M_w/1000$) of at least about 350;

said propylene/ethylene impact copolymer containing an additive package consisting essentially of: a phenolic antioxidant, a phosphite, and an acid scavenger;

said composition being essentially free of sodium containing additives.

18. The composition according to claim 17, wherein said acid scavenger is selected from the group consisting of: hydrotalcite like materials and calcium stearate.

19. The composition according to claim 17, wherein said propylene/ethylene impact copolymer further contains a thiosynergist.

20. The composition according to claim 19, wherein said propylene/ethylene impact copolymer contains the following amounts of each additive by weight based on said propylene/ethylene impact copolymer:

- from about 1000 to about 3000 ppm of a nucleating agent;
- from about 500 to about 1000 ppm of said phenolic antioxidant;
- from about 500 to about 800 ppm of said phosphite;
- up to 5000 ppm of said thiosynergist; and
- from about 200 to about 500 ppm of said acid scavenger.

21. A composition for producing household articles exhibiting enhanced resistance to staining, said composition comprising:

- a propylene homopolymer having a crystallinity of at least about 55 percent,
- said propylene polymer containing an additive package consisting essentially of: a phenolic antioxidant, a phosphite, and an acid scavenger;
- said composition being essentially free of sodium containing additives.

22. The composition according to claim 21, wherein said acid scavenger is selected from the group consisting of: hydrotalcite like materials and calcium stearate.

23. The composition according to claim 21, wherein said propylene homopolymer further contains a thiosynergist.

24. The composition according to claim 23, wherein said propylene homopolymer contains the following amounts of each additive by weight based on said propylene homopolymer:

from about 500 to about 1000 ppm of said phenolic antioxidant;

from about 500 to about 800 ppm of said phosphite;

up to 5000 ppm of said thiosynergist; and

from about 200 to about 500 ppm of said acid scavenger.

Evidence appendix

No evidence has been submitted pursuant to 37 C.F.R. §§ 1.130, 1.131 or 1.132. The below evidence has been entered by the Examiner and is being relied upon by the Appellant.

- (1) Technical Information for Lowinox DLTDP, from Great Lakes Chemical Corp.;
- (2) Sterically Hindered Phenols in Production and Processing of PVC, Wegmann *et al.*, see page 2, last paragraph;
- (3) The Chemistry and Service of Stabilization, from Great Lakes Chemical Corp., Lee *et al.*, see pages 4 and 11 -13.

Related proceedings appendix

Applicants, applicant's assignee and applicant's legal representative are unaware of any appeals, interferences or other proceedings that are related to the instant appeal, or that will affect, be affected by or have any bearing on the Board's decision in the instant appeal.